

**PATENT APPLICATION**

**TECHNIQUES FOR SIMULTANEOUSLY DISPLAYING A  
BACKGROUND PAGE AND AN INTERACTIVE CONTENT PAGE IN  
AN APPLICATION WINDOW**

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# **TECHNIQUES FOR SIMULTANEOUSLY DISPLAYING A BACKGROUND PAGE AND AN INTERACTIVE CONTENT PAGE IN AN APPLICATION WINDOW**

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## **BACKGROUND OF THE INVENTION**

[0001] The present invention relates to techniques for simultaneously displaying a background page and an interactive content page in an application window, and more particularly, to techniques for always displaying at least a portion of a background page in an application window while the application simultaneously displays content from a second content page.

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[0002] The Internet offers various ways for users to communicate with other users, such as instant messaging. Instant messaging provides real-time communication between users within a closed community. Only registered users can send or receive messages via an instant messaging service. Users are required to sign in to the same system (or possibly the same server) with a pre-selected user name and password before sending messages.

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[0003] An instant messaging software application typically allows a user to define a list of "friends" (i.e., other registered users with whom the user wishes to communicate) and to reject or ignore messages sent by other users. The list of friends is an important feature in an instant messaging application. A user can easily send an instant message to a friend in the friends list by clicking on that friend's username in the list. The friends list also indicates who is currently online and available to receive instant messages.

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[0004] The list of friends is displayed when the user clicks a tab on the bottom of an instant messaging window. A user can click on other tabs at the bottom of the instant messaging window to view other web features. For example, clicking on a stock tab displays a list of current prices for a selected group of stocks. Clicking on a news tabs displays a list of hyperlinks to today's top news stories. The contents displayed in these other tabs is typically accessed from a web page.

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[0005] The friends list is hidden when the instant messenger displays content from one of the other content tabs. As soon as the user clicks on one of these other content tabs, the user no longer has access to the important context of their friend's status. A user is therefore

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forced to choose between tracking the prices of their stocks and keeping an eye on their friends. For this reason, the features provided by these other tabs are greatly underutilized by IM users.

[0006] Therefore, it would be desirable to provide techniques for making a friends list visible while a user in an instant messaging environment views the content of other tabs.

#### BRIEF SUMMARY OF THE INVENTION

[0007] The present invention provides techniques for simultaneously displaying a priority background page and unrelated content from a content page in one software window. A user can minimize the content page, but the priority background page cannot be reduced to less than a minimum height. The content displayed in the content page can be interactive content obtained from a web page.

[0008] According to one embodiment of the present invention, the priority page is a list of friends displayed in a window by an instant messenger application. The list of friends remains visible in an instant messaging window while a content tab is simultaneously displayed in the window. The friends list is always visible in the window.

[0009] Other objects, features, and advantages of the present invention will become apparent upon consideration of the following detailed description and the accompanying drawings, in which like reference designations represent like features throughout the figures.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Figures 1A-1B illustrate examples of instant messenger windows that display a friends list simultaneously with content from a content tab in one window according to embodiments of the present invention;

[0011] Figure 1C illustrates how a minimized content tab looks in an instant messenger window displaying a friends list according to an embodiment of the present invention;

[0012] Figure 2A illustrates another view of an instant messenger window that simultaneously displays a friend's list and content from a content tab according to an embodiment of the present invention;

[0013] Figure 2B illustrates a process for simultaneously displaying a friends list and a content tab according to an embodiment of the present invention; and

[0014] Figure 3 is a diagram of a system that implements embodiments of the present invention.

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## DETAILED DESCRIPTION OF THE INVENTION

[0015] The present invention provides techniques for simultaneously displaying a priority page in one software window with a second content page. The user can view the second content page by clicking on a tab. The user can move and resize the second content page, but  
10 the software application prevents the user from hiding the priority page. Thus, the priority page is always visible in the background of the application window. The simultaneous display of the priority page and the second page allows a user to interact more easily with features on each page.

[0016] According to one embodiment of the present invention, an instant messenger  
15 application displays a friends list as the priority page. A user's friends in an instant messaging community are displayed in the friends list. The instant messenger also allows the user to view unrelated content from a second page, while simultaneously viewing contacts in the friends list in one window. Content from the second page is accessed from a web page through the Internet. Both the priority page and the second page can be interactive pages that  
20 are editable by a user.

[0017] Content on the second page can be, for example, stock quotes, weather reports, songs, or recent news stories. The second page is displayed when the user selects a tab in a tab selector region of the window. The instant messenger always maintains the friends list visible while the user views content from any of the tabs.

25 [0018] This embodiment of the present invention allows a user to monitor his/her friends while simultaneously viewing unrelated content from other tabs in one window. Also, a user can more easily compose instant messages to friends regarding content of the second content page when the friends list and the second content page are displayed simultaneously in the instant messenger window.

[0019] Although the present invention is discussed primarily in the context of a friends list in an instant messenger application, it should be understood that the present invention applies to other contexts as well that do not involve instant messaging.

[0020] Figures 1A-1C illustrate examples of the features of the present invention. Window 100 in Figures 1A-1C is a window that is generated by an instant messenger application. Window 100 displays a friends list 101 and tab container 102. Friends list 101 includes a list of people in the user's instant messenger community. The user can communicate with people in the friends list through the instant messenger application. Tab container 102 includes contents from a personalized content tab.

[0021] Window 100 also includes five tab selectors displayed in region 105. Each tab selector displays an icon that is specified as an attribute of its tab. The tab can specify different icons that are optimized for a particular skin. Rolling over the tab selector displays a tooltip with the tab's name.

[0022] If a user clicks any tab selector when the tab container is closed, the tab container is automatically opened to display the tab. This is a shortcut so that the user does not have to first use the collapse/expand toggle to open the tab container.

[0023] Tab container 102 displays personalized stock quotes in Figures 1A-1B. A user can select one of the other four tabs selectors shown in region 105 to display personalized content from another content tab in tab container 102. When another tab is selected, the content of the stock quotes tabs is hidden, and content from the newly selected tab is displayed in window 100.

[0024] According to the present invention, tab container 102 and the friends list 101 are displayed simultaneously in window 100. Only one of the content tabs can be displayed in window 100 at once. Friends list 101 is not a tab in window 100. Friends list 100 is a background page that is always visible in window 100 no matter what tab is selected in region 105.

[0025] When the user selects one of the tab selectors in region 105, content from the selected tab is displayed in window 100 without totally obscuring friends list 101. The instant messenger application sets a minimum height for friends list 101. The instant messenger application prevents the user from reducing the height of friends list 101 below its minimum height.

[0026] In Figure 1A, tab container 102 is displayed in the bottom 2/3 of window 100, and friends list 101 is displayed in a small region near the top of window 100. Figure 1A illustrates an example of a minimum height for friends list 101. The instant messenger application prevents the height of content tab 102 from being increased above the height shown in Figure 1A so that at least a portion of friends list 101 is always visible in window 100.

[0027] A user can shrink tab container 102, as shown in Figure 1B. By shrinking tab container 102, more of friends list 101 becomes visible. A user can resize tab container 102 as desired, except that the user is prevented from shrinking the height of friends list 101 below the minimum height. Each tab that is selected from tab selector 105 can have a different height.

[0028] The tabs can also have a minimum height so that it is not possible for a user to resize the tab such that it looks closed. A tab cannot be resized to a height that is greater than the tab's maximum height. There are usually no constraints on a tab's width.

[0029] A user can minimize or hide tab container 102 so that none of its content is visible, as shown in Figure 1C. When content tab 102 is minimized, friends list 101 is maximized in window 100. Header bar 110 of tab 102 is always visible so that the user can increase the size of content tab 102 at a later time.

[0030] Figure 2A illustrates another example of the present invention. Window 200 is also generated by an instant messenger application. Window 200 displays content tab 201 and friends list 202. Content tab 201 is a Radio tab that plays music. Tab 201 also displays content related to music. In Figure 2A, tab 201 displays information for a song that is currently playing including a song title, artist, time remaining, and an image. Tab 201 allows a user to start and stop the audio sound.

[0031] Content tab 201 is displayed in the top portion of window 200, and friends list page 202 is displayed in the bottom portion of window 200. As Figure 2A illustrates, a content tab can be displayed in any portion of an instant messenger window (top, bottom, or middle) as long as a portion of the friends list 202 remains visible. A user can click on the top portion 210 of radio tab 201 and drag the tab up or down within window 200.

[0032] A user can also resize tab 201. The height of tab 201 can be increased up to a minimum height. The instant messenger prevents friends list 202 from being totally hidden behind a content tab.

[0033] A user can view other tab containers by clicking one of the tabs in region 205. An instant messenger application of the present invention can provide numerous types of content pages, such as a finance tab, a calendar tab, a news tab, a sports tab, a weather tab, an alerts tab, a games tab, a bookmarks tab, a travel tab, an auctions tab, and an address book tab. Preferably, only one of these tabs can be displayed simultaneously with the friends list in one instant messenger window. However, in further embodiments, multiple content pages can be displayed simultaneously with a background page.

[0034] Tabs in tab selector 205 can be ordered based on frequency of usage. The user has the option to hide or delete certain tabs from tab selectors 205. Preferably, the instant messenger application prevents a user from deleting all of the tabs from tab selector 205. A user can also add tabs to tab selectors 205.

[0035] A user can hide the tab container 201 and tab selectors 205. If the user activates a feature that requires content tabs, but the content tabs have been hidden, the instant messenger application makes content tabs visible again to fulfill the user's request. For example, if the user has chosen to hide the content tabs, but selects "Start My Radio," the Radio tab 201 and tab selectors 205 become visible again in window 200.

[0036] The instant messenger application can be programmed with default tabs that are displayed in the absence of preferences set by the user. The instant messenger application can also have default tab settings that cannot be overridden by the user.

[0037] When a tab is closed or hidden, only the title of the tab and relevant sizing controls are visible in the instant messenger window as shown in Figure 1C. None of the tab's contents is visible, maximizing the number of contacts visible in the friends list for the current application window's height. Clicking the appropriate control on the tab's title bar opens the tab and resizes the selected content tab to its list-used height. Clicking the tab selector when the tab is closed reopens the tab area, restoring the selecting tab to its last-used height. Tabs can also have scroll bars that allow a user to scroll up and down to view additional content in a tab.

[0038] Figure 2B illustrates a process for simultaneously displaying a friends list and a content tab according to an embodiment of the present invention. At step 251, an instant messenger application displays a friends list in the background of an instant messenger window. At step 252, the instant messenger application displays a content tab in the instant messenger window simultaneously with the friends list, as shown, for example, in Figures 1A, 1B, and 2A. Step 252 can be performed when the user selects a tab in the tab selector region. At step 253, the instant messenger application prevents the user from hiding all of the friends list in the instant messenger window. For example, the instant messenger application prevents the user from reducing the size of the friends list below a minimum height.

[0039] Figure 3 illustrates an example of a system that implement embodiments of the present invention. The system includes an instant messenger (IM) server 302 and instant messaging clients such as IM clients 301. Only two IM clients 301 are shown in Figure 3 for simplicity. However, server 302 can communicate with many more IM clients 301. An IM client 301 launches an IM application to communicate with IM applications on other IM clients through IM server 302. IM server 302 transmits instant messages between the IM clients.

[0040] The contents inside the content tabs displayed in an instant messenger window are accessed from web pages. Each tab contains a browser control. Each client 301 can access web sites 304 for the tabs directly through the Internet 303 using the browser control. IM clients 301 access web sites 304 for each of the tabs through the Internet 303 as shown in Figure 3.

[0041] A client 301 can reload the contents of a tab by downloading data from the corresponding web site. Each tab in an IM window can update itself appropriately so as not to force users to manually trigger a refresh. The contents of a tab can also be refreshed manually when the user selects a refresh option.

[0042] A tab can have multiple attributes that define its behavior. For example, each tab has a name that is displayed in the tab title bar. Each tab can have a unique identification number that is used by the client IM application to identify the tab and also for reporting statistics about how often the tab is used. A tab can also have a content URL that specifies what web page to load inside the tab.

[0043] A tab can also have a tab image that is displayed in the tab selector region. A tab can also have a default height that is used the first time the user selects the tab a particular



client machine. Thereafter, when the user selects the tab, the last height of the tab is used. A tab can also have a maximum and minimum height as discussed above.

[0044] A tab can also specify the behavior for hyperlinks inside the tab. If enable browsing is activated, hyperlinks are opened inside of the tab itself (within the IM window).

5 Otherwise, the tab spawns new browser windows when the user clicks on a hyperlink inside the tab.

[0045] A tab can also be specified as a persistent tab. A persistent tab, once started, is not unloaded until the user signs out of the instant messenger client application. The Radio tab is an example of a persistent tab. Once a user starts the Radio tab and is listening to a radio  
10 station, switching to another tab does not disrupt the music audio.

[0046] A tab can specify whether or not it will be refreshed when the user selects a refresh option or button. A tab can be declared a trusted tab by including a signature that proves that the tab is trusted. The signature verifies that the content URL and the tab ID are indeed from a trusted Internet service or web page. Trusted tabs gain access to certain methods of the Tab  
15 JavaScript API.

[0047] Only trusted tabs can have access to a selected object, which is an array of contacts that are currently selected in the friends list. Only a trusted tab can receive contact selection events, query the instant messenger for more detailed information about a contact (such as data in the address book), and change the title of the tab in the tab title bar.

20 [0048] The purpose of trusted tabs having access to special functions is to build new functional tabs. For example, a new calendar tab can allow the user to select a friend or a contact and then click a button in the tab to invite the friend to a meeting.

[0049] The instant messenger can keep track of statistics relating to tab usage. For example, the instant messenger can count the number of times that the tab was switched to.

25 The instant messenger can also keep track of the amount of time that a tab was open. These statistics help to determine what tabs are most frequently used.

[0050] The present invention also allows a user to add a tab to an instant messenger window. Tab definitions are hosted by IM server 302. A client IM application retrieves new tabs from server 302 and installs the tabs as necessary. Third parties can host a link on a web  
30 page to help IM users install new IM tabs that may come out in the future through IM server 302.

[0051] According to another embodiment of the present invention, the instant messenger allows interaction between two pages, by concurrently displaying both the Friend List and a Content Tab. Interaction between two pages can involve communications between two IM users. For example, in the Messenger context, a user can drag a news article (from the news tab) over to a friend in the Friend List to open an IM window to that friend and to send the URL of the news article to the selected friend. As another example, a user can select a friend in the Friend List, and then select a game in a Games Tab to trigger an invitation to that Friend to play the game.

[0052] While the invention has been described with respect to specific embodiments, one skilled in the art will recognize that numerous modifications are possible. The various components of an instant messaging system may be implemented using hardware components, programmable devices (e.g., microprocessors) executing software instructions, and any combination thereof. "Instant messaging" as used herein is not limited to any particular protocol, format, delivery method, or form factor and includes messages delivered according to any protocol that enables communication among a closed community of authenticated users. Thus, although the invention has been described with respect to specific embodiments, it will be appreciated that the invention is intended to cover all modifications and equivalents within the scope of the following claims.